

IN THE CLAIMS

1. (Original) A system for cooling a semiconductor die, comprising:
a die having plurality of micro-channels; and
a condenser in fluid communication with the micro-channels, wherein die
heating vaporizes fluid at the die to force fluid towards the
condenser.
2. (Original) A system of claim 1, further comprising a plate
coupled with the die for sealing the micro-channels such that the micro-channels
form a plurality of fluid conduits for the fluid.
3. (Original) A system of claim 2, the plate being formed of
semiconductor material.
4. (Original) A system of claim 3, the plate being selected from
the group consisting of glass and silicon.
5. (Original) A system of claim 1, further comprising fluid
selected from the group consisting of water, Fluorinert and alcohol.
6. (Original) A system of claim 1, further comprising a first fluid
conduit for coupling cooler fluid from the condenser to the micro-channels.
7. (Original) A system of claim 6, further comprising a first
header for coupling the first fluid conduit to the micro-channels.
8. (Currently Amended) A system of claim 1, further comprising a
second fluid conduit for coupling warmer fluid from the micro-channels to the
condenser.
9. (Original) A system of claim 8, further comprising a second
header for coupling the second fluid conduit to the micro-channels.
10. (Original) A system of claim 1, the micro-channels being
shaped for preferential fluid flow along one direction in the micro-channels.

11. (Original) A system of claim 1, the condenser being constructed and arranged above the die wherein gravity pressurizes cooler condenser fluid towards the die.

12. (Original) A system of claim 1, further comprising at least one orifice for restricting fluid flow through at least one of the micro-channels, for preferential fluid flow along one direction in the micro-channels.

13. (Original) A system of claim 1, the condenser comprising one or more fins for enhancing heat transfer to air adjacent the condenser.